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Applicant (Assignee of Actual Inventor)	Metal and Moulding Manufacturers Pty. Limited.
Actual Inventor	Ernest Mate, of New South Wales.
Application and Provisional Specification	Accepted, 6th March, 1941.
Complete Specification after Provisional Specification	Lodged, 8th November, 1941.
Complete Specification	Accepted, 16th January, 1942.
Acceptance Advertised (Sec. 50)	29th January, 1942.

Class 06.6.

Drawing attached.

COMPLETE SPECIFICATION.

"Improvements relating to electric torches."

We, Metal and Moulding Manufacturers Pty. Limited, carrying on business as Manufacturers, at 3 St. Peters Street, Darlinghurst, near Sydney, in the State of New South Wales, Commonwealth of Australia, hereby declare this invention and the manner in which it is to be performed, to be fully described and ascertained in and by the following statement:—

This invention relates to electric torches of the kind capable of operating at fixed and also at changeable focal points.

The torch consists of a hollow body preferable [illegible] one or more dry cells [illegible] lamp [illegible] of the lamp [illegible] nection from the cell to the [illegible] which [illegible] metal [illegible]

The upper end of the body has an [illegible] member secured thereto [illegible]

[illegible] This member is screw threaded or otherwise formed to receive an electric lamp or bulb. Preferably the lamp is screwed into a socket in the said member and the latter has a metallic contact adapted to engage a central contact of the lamp and pass through the insulated material of the disc to the inside of the body where it is engaged by the dry cell terminal previously referred to.

The body also has a spring blade switch member secured at its lower end thereto, the said blade having intermediate its length [illegible] At the upper end the [illegible] for engaging [illegible] which after [illegible] body and a rolling piece attached at the upper end of [illegible]

[illegible] torch [illegible] project outwardly similar [illegible] push piece of the spring blade [illegible] member.

There is a bead or shoulder formed on the body a short distance from the top thereof upon which a sleeve member is supported.

The sleeve member carries the usual reflector and lens and forms the upper cap of the torch.

The sleeve member is capable of turning and sliding movement upon the top of the torch body and is provided with a focusing guide slot in which the resilient pin is engaged. A second slot termed the switch slot, is also formed in the sleeve and through which the said push piece projects, while at another position on the sleeve a round hole is formed through which the push piece may be alternatively passed.

The invention in one form provides [illegible] [illegible] flashing [illegible] fixed focus [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] may be performed except that [illegible] provided for focusing with a continuous [illegible] sleeve switch is not provided. The [illegible] "continuous" in the above sense does not include a push piece held down by hand. [illegible]

In order to protect the lamp from shock or damage should the torch be dropped a resilient shock absorber is provided upon the sleeve member and also if desired upon the body cap.

In order that the invention may be more readily understood reference will now be made to the accompanying drawings wherein—

Figure 1 is an expanded view of the complete torch showing the upper cap, the body and the lower cap.

[illegible]

[illegible] Figure [illegible] is a detail view [illegible] [illegible] Figure 3 showing the mounting [illegible] guiding pin.

[illegible] torch showing [illegible] focusing pin [illegible] push piece in their normal [illegible]

Figure [illegible] is a detail view of the upper cap or sleeve member showing the position of the focusing pin and push piece for intermittent lighting and variable focusing.

Figure [illegible] is a detail view of the upper cap or sleeve member showing the position of the focusing pin and the push piece for focusing with a continuous beam.

The cylindrical metal body 10 which receives the dry cells 11, Figure 4, is closed at its lower end by a screwed cap 12 of usual construction and is also closed at its upper end by a disc 13 of insulating material. This disc 13 receives an electric lamp 34. As illustrated a screw threaded socket 14 is provided for this purpose. The disc 13 has formed therewith a central contact 15 which is adapted to engage the central dry cell terminal 16 and provide a centre contact for the lamp 34 when screwed into the threaded socket 14. With [illegible] socket type of lamp the thread [illegible] [illegible] terminal and [illegible] with this [illegible] portion a [illegible] terminal is provided by the [illegible] of a U-shaped fitting 17 which is secured to the disc 13 by a rivet 35. One limb 35 of the U-shaped fitting 17 engages the lamp 34 while the other limb 36 is adapted to be engaged by a spring blade switch member 18 which is secured at one end to the body 10 by rivets 19, this said end of the spring member 18 being bent to form a resilient spacer 20 for the dry cell 11, see Figure 4.

The switch member 18 has a push piece 21 and when pressed inwards engages the limb 36 of fitting 17. The return circuit for the lamp is from the casing 10 through the usual spring 37 in cap 12 to the base of the lower dry cell 11 in well known manner.

A second spring blade 22 is secured to the body 10 [illegible] Figures [illegible] and [illegible] [illegible] [illegible] 23 [illegible] [illegible] 21 [illegible] through [illegible] 10 [illegible] [illegible] 23 [illegible] 24 [illegible] [illegible] 25 [illegible] 21 [illegible] 26 [illegible] 25 [illegible] 10 and [illegible] normally [illegible]

lead 27 carries a reflector 28, Figure [illegible] which together with lens 29 is retained in position by an annular shock absorber 30 of resilient material. It will be observed that as illustrated in Figures 1, 6 and [illegible] the sleeve member 25 has two diagonal focusing slot portions 31 and 32 extending from the transverse guiding or focusing slot portion 24 and that in addition to the hole 26 for the push piece 21 there is a diagonal slot 33 in which the said push piece 21 may move.

When the sleeve member 25 is placed upon the body 10, see Figure 6, the focusing pin 23 is depressed and finally enters the transverse slot 24; while at the same time the push piece 21 is depressed and finally enters hole 26. This position, Figure 6, [illegible] the normal position of the [illegible] 25 [illegible] the body 10 [illegible] the push piece 21 [illegible] lamp 34 through [illegible] blade 18 [illegible] limb 36.

[illegible] of the beam projected from the torch while having manual control of the push piece 21 the sleeve member 24 is turned to the right [illegible] to assume the position [illegible] and cause the focusing pin 23 to enter the diagonal slot 31 and the push piece 21 to enter the diagonal slot 33. This may easily be effected as the push piece 21 has a spherical head which enables it to be [illegible] while it passes from hole 26 to diagonal slot 33. In this Figure [illegible] position according to the degree of movement of the [illegible] 25 focusing may be achieved and [illegible] the push piece 21 [illegible]

[illegible] 25 [illegible] 26 [illegible] 33 [illegible]

[illegible] 25 [illegible] 23 [illegible] 32 [illegible] the push piece 21 passes [illegible] 25 [illegible] kept depressed [illegible] limb 36 [illegible]

In Figure [illegible] the extreme limit of focusing under the [illegible] condition has been attained.

It will be appreciated that various modifications may be made in the above construction without departing from the spirit of the invention, as defined by the appended claims.

Having now fully described and ascertained our said invention and the manner in which it is to be performed, we declare that what we claim is:—

1. Improvements in electric torches, comprising a cylindrical body for receiving dry cells, said body having a screwed cap, a disc of insulating material secured to the body for receiving an electric lamp, said disc also having electrical contacts for the lamp, one of said contacts being capable of engagement by a switch blade member [illegible] member [illegible] upon the [illegible] having a hole to receive the said push piece, said body also having a [illegible] guiding slot in the said sleeve member for the purpose of controlling the turning and sliding movement of the sleeve with relation to the body.

2. Improvements in torches as claimed in Claim 1, characterised in that the electrical contacts for the lamp consist of a central contact which engages both the lamp and the dry cell battery and a [illegible] shaped fitting one limb of which engages the lamp while the other limb is capable of being engaged by the switch blade member.

3. Improvements in torches as claimed in Claim 1, characterized in that the said slot in the sleeve has a horizontal portion and one or more diagonal portions in which the [illegible] sleeve [illegible]

[illegible] claimed in Claim [illegible] the [illegible] slot [illegible]

[illegible] Claim [illegible] and 3 [illegible] the said push piece [illegible]

6. Improvements [illegible] Claim [illegible]

the sleeve member has a reflector and a lens held in position by an annular shock absorber of resilient material.

7. Improvements in electric torches having a body and a movable sleeve member carrying a reflector and a lens characterised in that the body has a resilient guide pin and a contact making push piece, said guide pin functioning to guide the sleeve with respect to the body and also serving to focus the beam from the torch, said push piece being capable of manual depression at a fixed focal point and also of being depressed manually at variable focal points, said push piece being further capable of being automatically depressed to give a continuous beam at a fixed focal point or alternatively at variable focal points.

8. An improved electric torch substantially as described and as illustrated in the accompanying drawings.

Dated this 7th day of November, 1941.

METAL AND MOULDING MANUFACTURERS PTY LIMITED,

By its Patent Attorneys,

EDWD. WATERS & SONS,

Fellows Institute of Patent Attorneys of Australia.

Witness: [illegible] Wells.

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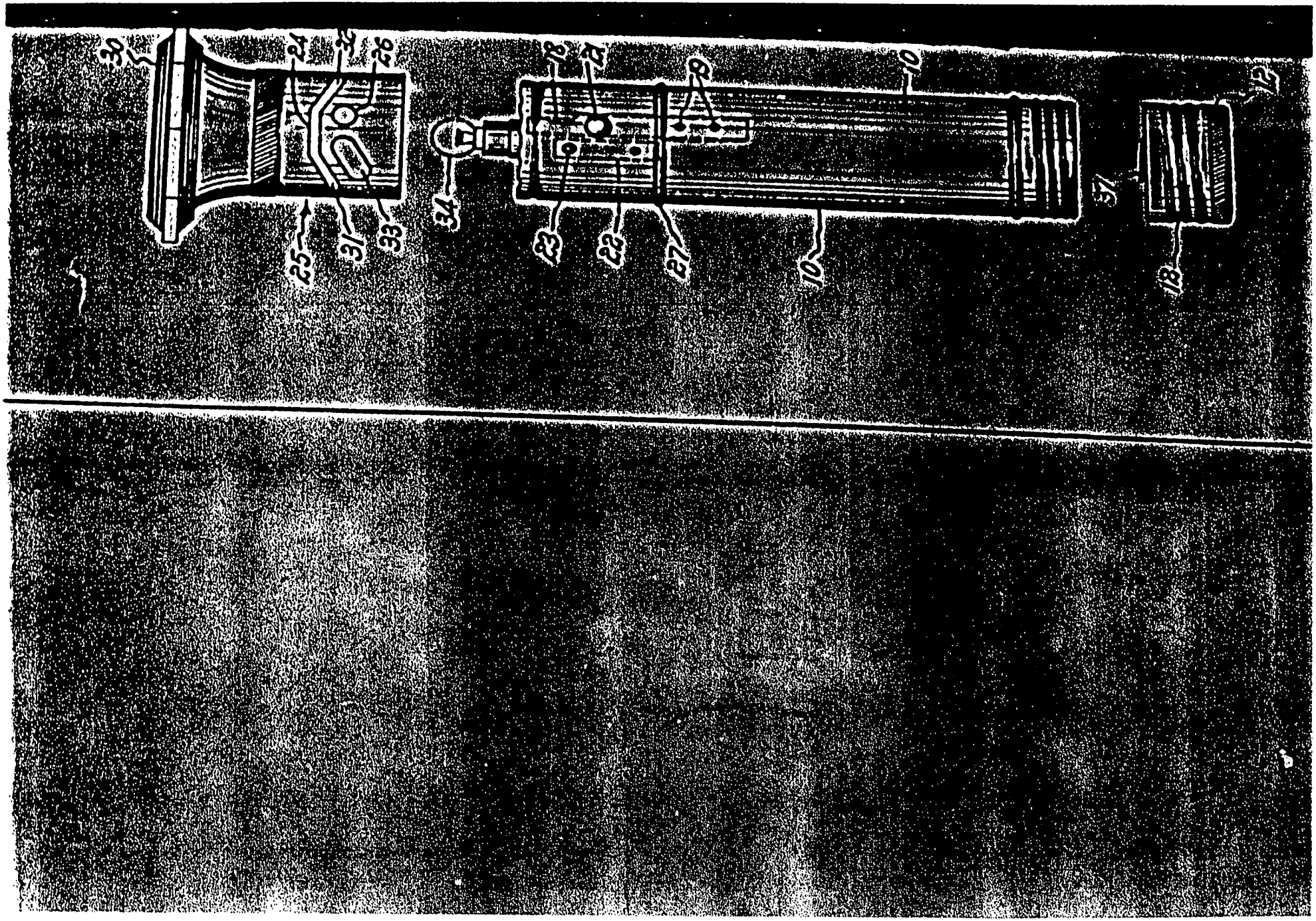

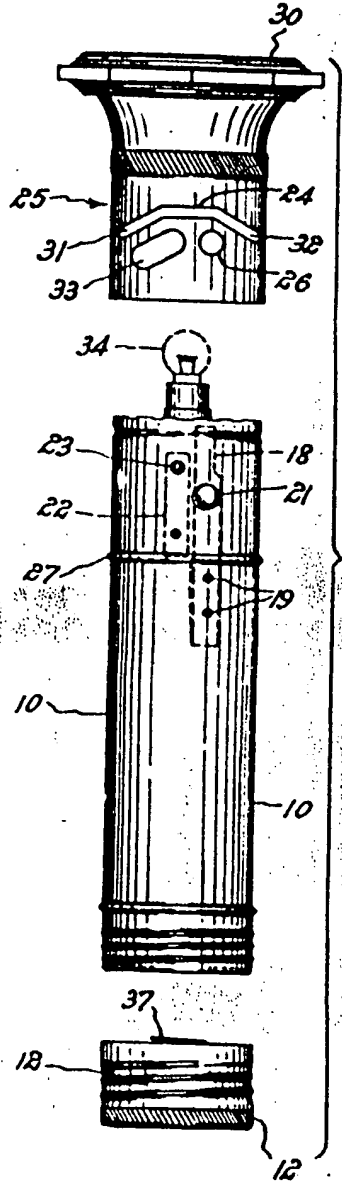

Fig.1.

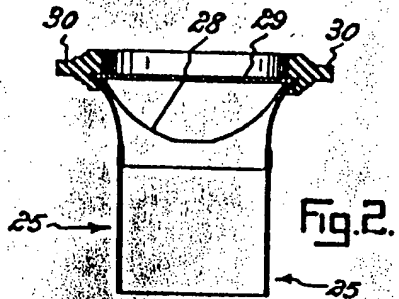

Fig.2.

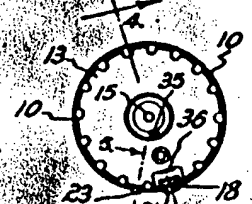

Fig.3.

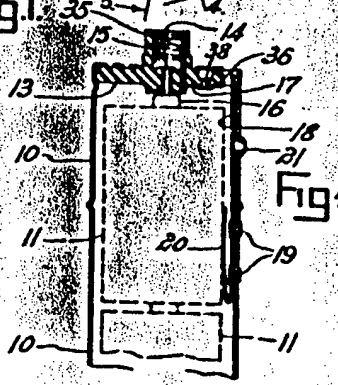

Fig.4.

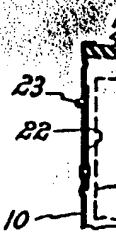

Fig.5.

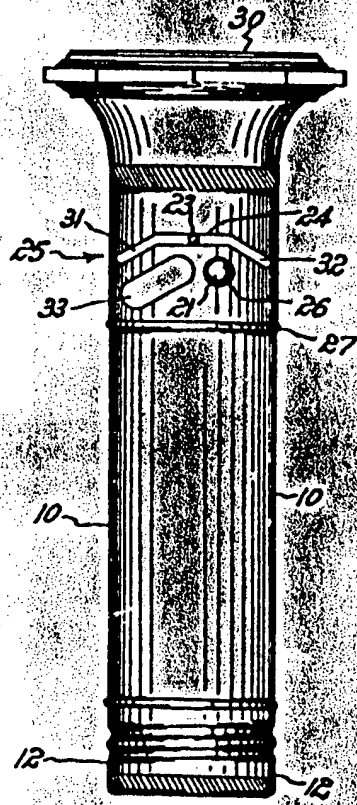

Fig.6.

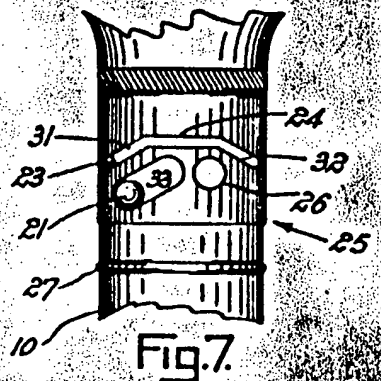

Fig.7.

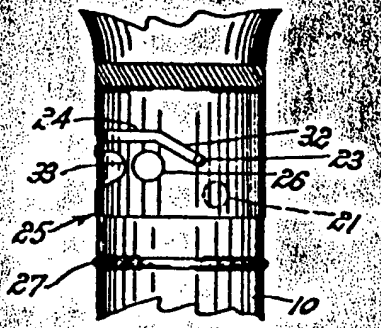

Fig.8.